

# Computer Supported Interprofessional Education for Improving Health Profession Students' Attitudes Toward Teamwork

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# Objectives

1. Discuss strategies to enhance IPE communication using technology.
2. Identify **computer** supported strategies to encourage reflection after an IPE experience.

# Methodology

- Pretest- Post-test design
- Attitude Toward Health Care Team Scale (ATHCTS)\*
- Team Performance Scale (TPS)

\*Heinemann, G. D., Schmitt, M. H., Farrell, M., & Brallier, S. A. (1999). Development of an attitudes toward health care teams scale. *Evaluation & The Health Professionals*, 22(1), 123-142

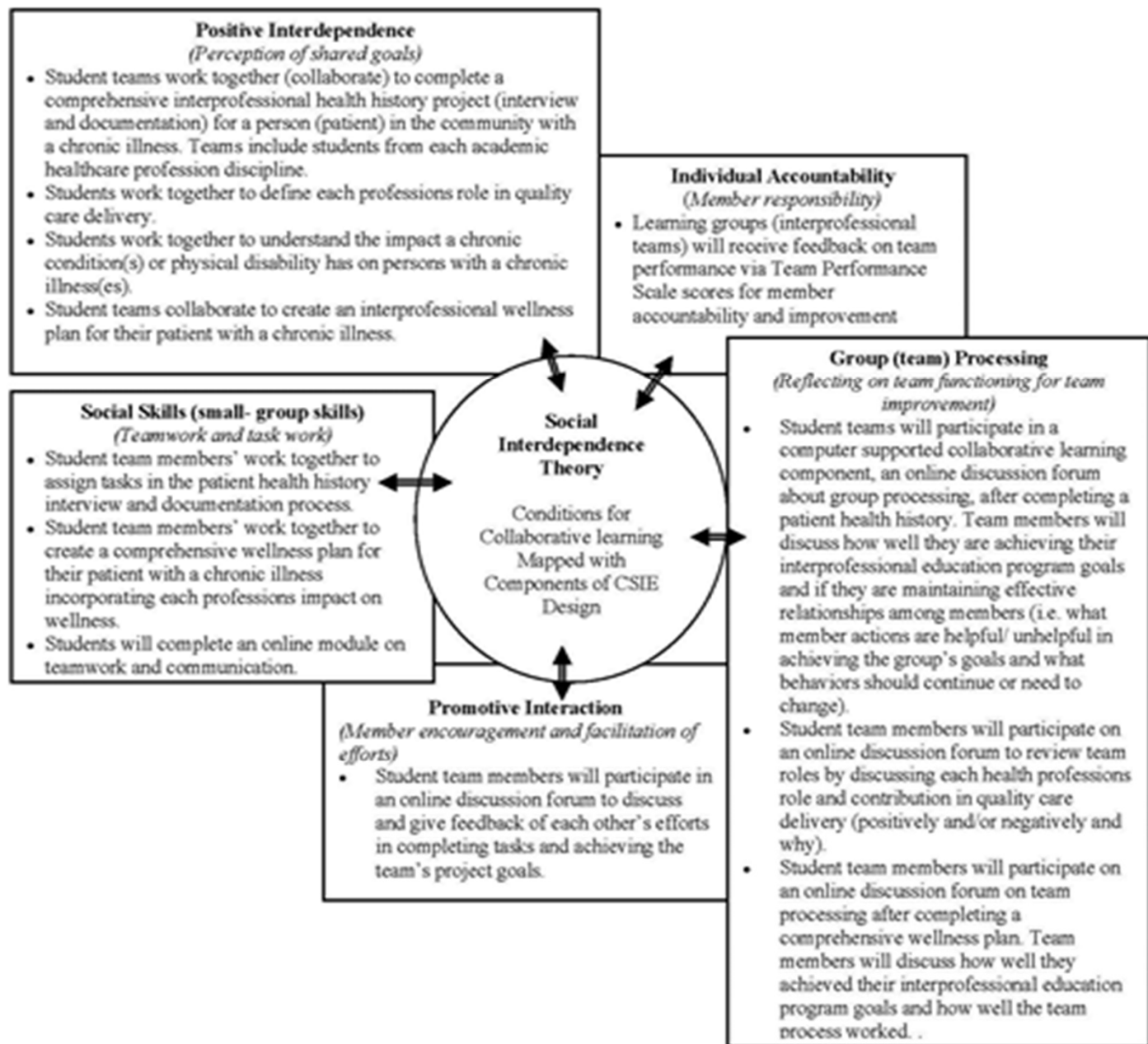


Figure 1. Social Interdependence theory five essential elements and corresponding CSIE design components. From "The state of cooperative learning in postsecondary and professional settings," by D. Johnson, R. Johnson, & K. Smith, 2007, *Educational Psychology Review*, 19, p. 15-19. Copyright 2007 by Johnson & Johnson. Adapted with permission.

# Sample: Demographics

	<i>n</i>	<i>Percent (%)</i>
<b>Gender</b>		
Male	24	38.0
Female	39	62.0
Total	63	
<b>Age</b>		
19- 22	29	52.7
23- 26	22	40.0
27- 38	3	5.4
+39	1	1.8
Total	55	
<b>Previous Team Experience</b>		
In a work setting <sup>a</sup>	52	92.9
In a athletic/ recreation capacity <sup>b</sup>	48	90.6
<b>Academic Discipline</b>		
Nursing	17	27.0
Medicine	26	41.3
Pharmacy	8	12.7
Physical Therapy	2	3.2
Occupational Therapy	9	14.3
Couples/Family Therapy	1	1.6
Total	63	
<b>Previous College Degree</b>		
Associate	3	4.8
Baccalaureate	48	76.2
Graduate	1	1.6
None	4	7.1
Total	56	

Note. a = 56. b = 53.

# **Technology Supported Interprofessional Education**

- **Incorporates the advantages of face-to-face delivery methods with computer supported technologies**
- **Utilizes a Learning Management System (i.e., Blackboard®)**
- **JCIPE's Health Mentor Program overview:**
  - **Module 1: Comprehensive Life and Health History**
  - **Module 2: Preparing a Wellness Plan**

# Small Group Online Discussion

- Asynchronous online discussions for reflection and debriefing
- Mirrored face-to-face small group format



# Access to Online Discussions

The screenshot shows a web browser window with the URL [https://pulse.jefferson.edu/webapps/portal/frameset.jsp?tab\\_id=\\_2\\_1&url=%2fwebapps%2fblackboard%2fexecute%2flauncher%3ftype%3dCourse](https://pulse.jefferson.edu/webapps/portal/frameset.jsp?tab_id=_2_1&url=%2fwebapps%2fblackboard%2fexecute%2flauncher%3ftype%3dCourse). The page title is "Blackboard Academic Suite". The navigation bar includes links for Home, Help, and Logout. The main navigation menu includes My Pulse, Banner, Courses, Organizations, JeffMail, Library/JEFFLINE, JeffShare, PeopleSoft, Campus News, and Index. The left sidebar contains a list of links: Announcements, Faculty & Staff Information, Y2 HMP Orientation Module 3, Team Wikis, Team Survey, Student Leaders, Online team discussions, Tools, and Communication. The main content area displays the path "YEAR 2: HEALTH MENTORS PROGRAM (HMP2010-2012) > ONLINE TEAM DISCUSSIONS". The section title is "Online team discussions". Below this, there is a sub-section "Online team debriefing discussions (Module #3)" with a note: "This space is only for Health Mentor Team #'s: 1, 2, 3, 4, 5, 6, 7, 8, 72, 73, 113, 116". A paragraph states: "As discussed, your online debriefing discussion forum will be posted here and available in November. All posts (including initial and reply) will be **due by Monday November 7th 5pm.**". Below this, there are four links to discussion boards: "Teams 1, 2, 3 & 4: Link to Discussion Board", "Teams 5, 6, & 7: Link to Discussion Board", "Teams 8, & 72 Link to Discussion Board", and "Teams 73, 113, & 116: Link to Discussion Board".

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Announcements  
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Control Panel  
Refresh  
Detail View

YEAR 2: HEALTH MENTORS PROGRAM (HMP2010-2012) > ONLINE TEAM DISCUSSIONS

Online team discussions

Online team debriefing discussions (Module #3)

*This space is only for Health Mentor Team #'s: 1, 2, 3, 4, 5, 6, 7, 8, 72, 73, 113, 116*

As discussed, your online debriefing discussion forum will be posted here and available in November. All posts (including initial and reply) will be **due by Monday November 7th 5pm.**

Teams 1, 2, 3 & 4: Link to Discussion Board

Teams 5, 6, & 7: Link to Discussion Board

Teams 8, & 72 Link to Discussion Board




Teams 73, 113, & 116: Link to Discussion Board






# Discussion Example

Announcements  
Faculty & Staff  
Information  
Y2 HMP Orientation  
Module 3  
Team Wikis  
Team Survey  
Student Leaders  
Online team  
discussions  
Tools  
Communication

## Tools

 Communication  
 Course Tools  
 Course Map

 Control Panel


 Refresh  
 Detail View

YEAR 2: HEALTH MENTORS PROGRAM (HMP2010-2012) > COMMUNICATIONS > GROUP PAGES > DISCUSSION GROUP (TEAMS 1, 2, 3, & 4) > GROUP DISCUSSION BOARD



## Discussion Board

 Forum

Display Order	Forum	Total Posts	Unread Posts	Total Participants
1 	<a href="#">Module #3 Discussion</a>  -  1) Think back on your team's home visit (or interview) with your Health Mentor and review your teams Safety Plan. Identify the <i>most interesting</i> aspect of this visit and/or assignment to share with other teams.  Here are a few examples (or <b>you can come up with something else on your own, too</b> ):  - Identify one of the most important safety hazards in the home and discuss team strategies for managing this hazard.  - Highlight one of your Health Mentor's most important safety strengths and ways the team can support this safety step.  - Address a specific surprise that came up during the home visit and in assessing a person's safety.  - Present a unique aspect of this interprofessional team experience.  - Present an overview of the evidence-based article (referenced in your Team Safety Plan) that supports the teams' recommendations for maximizing patient safety.  2) How can the ICF framework be incorporated into patient safety assessment?  3) Module 4 Preparation - In the next module, you will be exploring Health Behavior Change and Self Management Support with your Health Mentor. What aspects of your team process (interview style, listening techniques, visit preparation, assignment completion) will you keep the same for the next Module and what might you change?  Please respond to at least one fellow student.	0	0	0

# Online Survey

- **Online survey data collection to evaluate effective group functioning**
- **Team Performance Scale (TPS)**

Thompson, B., Levine, R., Kennedy, F., Naik, A., Foldes, C., Coverdale, J., Kelly, P.A., Haidet, P. (2009). Evaluating the quality of learning team processes in medical education: Development and validation of a new measure. *Academic Medicine*, 84(10), s124-s127

### Team Performance Scale

Based on your **OVERALL** experience with your team during the Health Mentors Program, please estimate **HOW OFTEN** the following events occurred using the scale: 0=None of the time; 3=Some of the time; 6=All of the time.

	None of the time			Some of the time			All of the time
1. All team members made an effort to participate in discussions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. When team members had different opinions, each member explained his/her point of view.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Team members encouraged one another to express their opinions and thoughts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Team members shared and received criticism without making it personal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Different points of view were respected by team members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Often members helped a fellow team member to be understood by paraphrasing what he/she was saying.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. My team used several techniques for problem solving (such as brainstorming) with each team member presenting his/her best ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Team members worked to come up with solutions that satisfied all members.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. All team members consistently paid attention during group discussions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. My team actively elicited multiple points of view before deciding on a final answer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Team members listened to each other when someone expressed a concern about individual or team performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Team members willingly participated in all relevant aspects of the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Team members resolved differences of opinion by openly speaking their mind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Team members used feedback about individual or team performance to help the team be more effective.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Team members seemed attentive to what other team members were saying when they spoke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. My team resolved many conflicts by compromising between team members, with each one giving in a little.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. Members who had different opinions explained their point of view to the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Team members were recognized when something they said helped the team reach a good decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Submit

# TPS Results Page

## Team Performance Scale

Your team has completed the Team Performance Scale that measured the quality of your team interactions and performance for module 1 of the Health Mentor's Program. Key attributes of effective teams include high level engagement by all team members, discussions of the team's work at deep conceptual levels, and a strong sense of team identity. Your teams average score result was **5.79**.

### How to interpret your results:

Remember that the answer scale ranged from 0 (*none of the time*) to 6 (*all of the time*).

An average score 0 - 2.9: **Needs improvement.** Your score indicates that your team needs to work on team building. Please contact Sokha Koeuth who is the Health Mentor's Program Education Coordinator for assistance and resources.

An average score 3 - 4.9: **Working well.** Continue to work on teamwork. Discuss and reflect upon what is working and what needs improvement for effective team functioning. Examples include what member actions are helpful/ unhelpful in achieving the group's goals and what behaviors should continue or need to change.

An average score 5 - 6: **Great job!** Your team is working well. Discuss what is working and why. Continue to have open dialogue of teamwork and communication.



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# Results

	Pre- mean (SD)	Post- mean (SD)	p
ATHCTS (scale 1-5)	3.71 (0.48)	3.82 (0.61)	.131
TPA (scale 0-6)	5.27 (0.70)	5.55 (0.59)	.016

# Results- ATHCTS

Question Item	<i>n</i>	<i>Pre</i>		<i>Post</i>		<i>t</i> (50)
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
4. Patients receiving team care are more likely than other patients to be treated as whole persons	53	3.73	1.20	4.17	1.01	-2.60*
5. Working on a team keeps most health professionals enthusiastic and interested in their jobs	54	3.37	0.68	3.80	0.92	-3.01*
7. Health professionals working on teams are more responsive than others to the emotional and financial needs of patients	52	3.29	0.89	3.75	0.93	-2.95*
8. The team approach permits health professionals to meet the needs of family caregivers as well as patients	53	3.72	0.74	4.04	0.78	-2.50*
10. Hospital patients who receive team care are better prepared for discharge than other patients	52	3.60	0.89	4.29	0.80	-4.64**
12. The team approach makes the delivery of care more efficient	52	3.94	0.96	3.63	1.07	2.36*

Note. Scale = 1 (strongly disagree) to 5 (strongly agree).

\*  $p < .05$ . \*\* $p < .001$ .

# Results

## TPS

Question Item	<i>Pre</i>		<i>Post</i>		<i>t</i> (50)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
2. When team members had different opinions, each member explained his or her point of view.	5.08	1.0	5.53	0.72	-3.55*
7. My team used several techniques for problem solving (such as brainstorming) with each team member presenting his or her best ideas.	5.13	0.98	5.43	0.79	-2.07*
8. Team members worked to come up with solutions that satisfied all members.	5.28	0.80	5.55	0.68	-2.30*
12. Team members willingly participated in all relevant aspects of the team.	5.20	0.97	5.50	0.87	-2.16*
13. Team members resolved differences of opinion by openly speaking their mind.	5.22	1.10	5.48	0.68	-2.09*
16. My team resolved many conflicts by compromising between team members, with each one giving in a little.	5.15	0.95	5.45	1.0	-2.04*
17. Members who had different opinions explained their point of view to the team.	5.30	0.87	5.57	0.72	-2.09*
18. Team members were recognized when something they said helped the team reach a good decision.	5.43	0.79	5.68	0.60	-2.58*



# Discussion

- **Implications**
- **Limitations**
- **Recommendations**
- **Conclusion**

# Student Satisfaction

- **Mostly positive**
- **92% continued with online option**
- **“Convenient”**
- **“Flexible”**

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